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Correlation of the carbonate formation in the Frasnian stage of northern Stalingrad Province. Geol. nefti i gaza 5 no. 5:34-38 My '61. (MIRA 14:4)

1. Stalingradskiy nauchno-issledovatel'skiy neftegazovyy institut.
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(Rocks, Carbonate)

SIVOKON', P.Ye.; SPASSKIY, B.I., dots.; LEONT'YEV, V.M., red.;
LAZAREVA, L.V., tekhn. red.

[Origin and philosophical nature of scientific experiment]
O proiskhozhdenii i filosofskom znachenii estestvenno-
nauchnogo eksperimenta. Moskva, Izd-vo Mosk. univ., 1962.
201 p. (MIRA 15:5)
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LEONT'YEV, V.M.

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1. Linevskaya promyslovo-geofizicheskaya ekspeditsiya.
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LEONT'YEV, V.N.

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(Mining geology) (Mine timbering)

KUZMIN, G.P.; ZHARKOV, M.M., nauchnyy sotrudnik; ZHUKOV, B.A., nauchnyy sotrudnik; KLIMOV, N.A., nauchnyy sotrudnik; LEONT'YEV, V.N., nauchnyy sotrudnik; FEDYANIN, A.S., nauchnyy sotrudnik

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1.Glavnyy inzhener tresta Kiselevskugol' Kuznetskiy basseyn (for Kuz'min). 2.Institut gornogo dela Sibirskogo otdeleniya AN SSSR (for all except Kuz'min).
(Kuznetsk Basin--Coal mines and mining)

CHINAKAL, N.A., prof., zasluzhennyy deyatel' nauki i tekhniki; PRIKHOD'KO
P.T., prof., doktor meditsinskikh nauk; LEONT'YEV, V.N., dotsent,
kand.tekhn.nauk

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(Gorbachev, Timofei Fedorovich, 1900-)

CHINAKAL, N.A., prof., zasluzhennyy deyatel' nauki i tekhniki; PRIKHOD'KO, P.T., prof., doktor nauk; LEONT'YEV, V.N., dots., kand.tekhn.nauk

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1. Chlen-korrespondent AN SSSR (for Chinakal).
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1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR.

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1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR (for Leont'yev). 2. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut (for Kovrizhin). 3. Nauchno-issledovatel'skiy institut stroitel'stva ugol'nykh i gornorudnykh predpriyatiy, Kemerovo (for TSay). 4. Vostochnyy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti (for Murashev). 5. Sibirskiy filial Vsesoyuznogo nauchno-issledovatel'skogo marksheyderskogo instituta (for Kuksov). 6. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut dobychi uglya gidravlicheskim sposobom (for Ivanushkin). 7. Kuzbasskiy sovet narodnogo khozyaystva (for Ivanov). 8. Kemerovskiy gornyy institut (for Kovachevich).

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(CRIMEA--HEALTH RESORTS, WATERING-PLACES, ETC.)

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MINKINA, V.A.; LEONT'YEV, V.Ya.

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LEONT'YEV, V.Ya.

Physical developmeny of children suffering from rheumatic fever. Vop.revm. 1 no.4:67-72 O-D '61. (MIRA 16:3)

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KAGANOV, S.Yu.; LEONT'YEV, V.Ya., EL'BERG, Ye.I., KHARINA, A.M.

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LEONT'YEV, Ye.

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1. Spetsial'nyy korrespondent zhurnala "Za rulem."
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(Aluminosilicates)
(Surface-active agents)

SIGAREV, A.M.; LEONT'YEV, Ye.A.

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1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

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SO: Knizhnaya Letopis', Vol. 3, 1955

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M. A. YOUTZ
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The application of replica production to the electron-microscopic investigation of silica gel and porous glass. E. A. Leont'ev and V. M. Luk'yanovich. *Doklady Akad. Nauk S.S.S.R.* 103, 1039-40(1955).—Two methods of replica production were used, the collodion and the quartz-polystyrene. The samples were first treated with HF. The electron-microscope pictures at 14,000 magnifications showed that the SiO_2 gel consisted of somewhat elongated rounded particles. The porous glass photomicrographs exhibit a different structure, namely a blistered, spongy structure, with pores of the order of hundredths and tenths of a μ. These pores are explained on the basis of the porous-glass-formation method in which sol. components are leached from borosilicate glass. W. M. Sternberg

RM

Inst-Phys-Chem., AS USSR

LEONT'YEV, Ye.A.; LUK'YANOVICH, V.M.; SOKAL'SKIY, Z.Ya.

Electron microscopy of Polish silica from deposits in the Sandomierz region. Izv.AN SSSR. Otd.khim.nauk no.10:1168-1170 O '56. (MLRA 9:12)

1. Institut fizicheskoy khimii Akademii nauk SSSR Politekhnicheskiy institut, Glivitse, Pol'sha.
(Sandomierz region--Silica)

LEONT'YEV, YE. A.

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Structure changes in the aluminum silicate catalyst studied by adsorption and electron-microscope investigations. A. V. Kiselev, E. A. Leont'ev, V. M. Luk'yanovich, and Yu. S. Nikitin (Inst. Petroleum Ind., Inst. Phys. Chem., and M. V. Lomonosov State Univ., Moscow). *Zhur. Fiz. Khim.* 30, 2149-60 (1956).—Structural changes were investigated in 2 spherical Al silicate catalysts, made by calcining the catalysts at 600° for 6 hrs., and by steam-heating them at 750° for 24 hrs., by studying the adsorption-desorption curves of MeOH and C_6H_6, and by electron-microscopic investigation at 11,000-29,000 magnifications of the samples. The porosity was tested by the B.E.T. method. Heating at 900°, reduces the sp. surface and the porosity of the catalyst, without affecting appreciably the pore size. Steaming greatly reduces the sp. surface and enlarges the pore size. The primary components of the catalyst structure become much larger, smoother, and more uniform; the heat-treatment at 900° lowers the "energetic" const. of the adsorption isotherm of benzene vapors, whereas prolonged steam-treatment increases that const.; this is attributed to a further dehydration during the calcination, and a partial hydration during the steam-treatment. W. M. Sternberg

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LEONT'YEV, Ye. A.

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Preparation of highly dispersed nonporous silica by burning silicoörganic compounds. A. K. Bonetskaya, E. A. Leont'ev, and E. A. Kharlamov. *Zhur. Priklad. Khim.* 30, 1237-8(1957).—The vapors of Et orthosilicate heated to 100° were carried out of a horizontal cylinder with compressed air and burnt at a series of nozzles immediately below a revolving water-cooled drum. The condensed SiO_2 was scraped off the surface of the latter. The proportion of air was crit., and the presence of $SiCl_4$ in the silicate tended to darken the powder. The particle-distribution curve of the product indicated a narrow and sharp peak of 60% between 80 and 150 A. diam. I. Bencowitz

4E4j

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N5 MB

LEONT'YEV, Ye.A.; LUK'YANOVICH, V.M.; MIL'MAN, B.S.

Electron microscopic investigation of the structure of spheroidal graphite in cast iron. Dokl. AN SSSR 112 no. 3:461-463 Ja '57. (MLRA 10:4)

1. Institut fizicheskoy khimii Akademii nauk SSSR i TSentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya. Predstavleno akademikom M.M. Dubininym.
(Cast iron) (Graphite)

LEONT'YEV, YE. A.
LUKYANOVICH, V. M., DUBININIM, M. M., LEONT'YEV, Ye. A., SARACHOV, A. I.

E "Examination of the Porous Structure of Activated Charcoals."

PAPER submitted for presentation at Fourth Int'l. Conferencef on Electron Microscopy, Berlin, GFR, 10-17 Sep 58.

Institute for Physical Chemisty, USSR Acad. Sci. Moscow.

C-3,800,829, 25 Jul 58.

LEONT'YEV, Ye. A.

24(6) 13

PHASE I BOOK EXPLOITATION SOV/1408

Soveshchaniye po metodam issledovaniya struktury vysokodispersnykh i poristykh tel. 2d, Leningrad, 1956.

Metody issledovaniya struktury vysokodispersnykh i poristykh tel; trudy vtorogo soveshchaniya (Methods of Investigating the Structure of Highly Disperse and Porous Bodies; Transactions of the Second Conference) Moscow, Izd-vo AN SSSR, 1958. 294 p. 2,000 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut fizicheskoy khimii and Institut khimii silikatov.

Resp. Ed.: Dubinin, M.M., Academician; Ed. of Publishing House: Razumova, L.L.; Tech. Ed.: Markovich, S.M.

PURPOSE: This book is intended for scientists, teachers and advanced students interested in the structural analysis of highly disperse and porous bodies.

COVERAGE: This collection contains reports by members of various Soviet institutions of higher education: Institute of Physical Chemistry, AS UkrSSR;

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Institute of Chemistry, AS Georgian SSR; Far Eastern Branch, AS USSR; Georgian Scientific Research Institute for Petroleum; State Optical Institute; Leningrad Technological Institute; Moscow and Leningrad State Universities; Far Eastern Polytechnic Institute; "Agrophysical" Institute, and others. Introductory remarks were made by Professor N.A. Toropov, Director of the Institute of Silicate Chemistry. Apart from reports under the four subject divisions (see Table of Contents), the collection includes discussions, considerations and proposals adopted at the close of the conference.

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SOV/58-59-7-15876

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 176 (USSR)

AUTHORS: Leont'yev, Ye.A., Luk'yanovich, V.M.

TITLE: Electron Microscopic Study of the Structure of Porous Bodies Using the Replica Method

PERIODICAL: V sb.: Metody issled. struktury vysokodospersn. i poristykh tel. Moscow, AS USSR, 1958, pp 19 - 36. Diskus., pp 37 - 44

ABSTRACT: The authors describe various methods of preparing replicas for the study of the structure of porous and highly dispersed (single-stage colloidal and carbon) bodies, and two-stage polysterene-quartz, colloid-quartz, and colloid-beryllium bodies, preshadowed with chrorium. They carry out a quantitative check of the accuracy of the replica method for particles ~ 100 Å in size. The results of this check show that the various replicas yield very similar data. The authors note that it is expedient to use stereoscopy for the study of porous bodies. The bibliography contains 24 titles. (In-t fiz. khimii AS USSR, Moscow).

A.N.P.

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SOV/62-58-9-4/26

AUTHORS: ~~Leont'yev, Ye. A.,~~ Luk'yanovich, V. M., Neymark, I. Ye., Piontkovskaya, M. A.

TITLE: Investigation of the Structure of Titanium Dioxide Gels by Independent Methods (Issledovaniye struktury geley dvuokisi titana nezavisimymi metodami)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 9, pp 1037 - 1044 (USSR)

ABSTRACT: In only a few papers on the structure of titanium dioxide gels is the dependence of the catalytic and adsorption properties of titanium dioxide gel upon the conditions of their preparation exclusively considered (Ref 4). The porous structure of the titanium dioxide gels is not considered in this paper. In order to get a comprehensive conception of the structure of these gels and to define more clearly the various methods with which they may find practical application the authors of this paper investigated titanium dioxide gels of various structures. Independent methods of investigation were used. Working in cooperation with the Institute of Physical Chemistry

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Investigation of the Structure of Titanium Dioxide SOV/62-58-9-4/26
Gels of Independent Methods

AS UkrSSR (preparation of the titanium dioxide gels of various structures and investigations on adsorption and structure) and with the Institute of Physical Chemistry AS USSR (electron microscopic, X-ray, and electron diffraction investigations) they obtained good results. The adsorption and electron microscopic investigations were extended to a series of gels of titanium dioxide, which was prepared by the hydrolysis of titanium chloride. The gels consisted of spherical particles which appeared non-porous at first sight. The specific surface area of the gels depended mainly on the size of the particles, whereas the character of the porosity depended on the size and the density of packing. The pores appeared as interstitial spaces (between the touching particles). The exchange of water present in the gels for other liquid of smaller surface tension made it possible to adsorb larger particles while maintaining the tight packing of particles. Increasing the formation time for the titanium dioxide gel in the formation solution diminished the porosity as a result

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Investigation of the Structure of Titanium Dioxide Gels of Independent Methods SOV/62-58-9-4/2

of the adsorbed particles becoming more closely packed. There are 7 figures, 2 tables, and 14 references, 10 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, AS USSR) Institut fizicheskoy khimii im.L.V.Pisarzhevskogo Akademii nauk Ukrainskoy SSR (Institute of Physical Chemistry imeni L.V.Pisarzhevskiy, AS UkrSSR)

SUBMITTED: March 28, 1957

Card 3/3

AUTHORS: Leont'yev, Ye. A., Luk'yanovich, V. M. SOV/76-32-8-[illegible]

TITLE: The Preparation Technique in the Electron-Microscopic In-
vestigations of Porous Bodies and Powders According to the
Replica Method (Tekhnika preparirovaniya pri provedenii
elektronno-mikroskopicheskikh issledovaniy poristykh i
poroshkoobraznykh tel metodom replik)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 8, pp. 1[illegible]-1[illegible]
(USSR)

ABSTRACT: Some modifications of the technique employed in the prepara-
tion of replicas are described. In the explanation of the
selection and application of the replica of porous bodies it
is mentioned that the carbon replica obtained according to
the method by Bredli (Bradley) (Ref 3) yields the best re-
sults. The well-known polystyrene-quartz method is recom-
mended for carrying out the two-state method. The separation
and processing of the replicas is explained according to
four points, and an apparatus for stripping the replica is
described. Some instructions are given, and in the selection
of the type of replica the character of the porous structure
of the object is pointed out. A preparation method of powder

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SOV/76-32-8-32/37

The Preparation Technique in the Electron-Microscopic Investigations of Porous Bodies and Powders According to the Replica Method

replica is described which is modified according to the solubility of the powder. There are 2 figures and 7 references, 2 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii, Moskva (AS USSR, Institute of Physical Chemistry, Moscow)

Card 2/2

LEONT'YEV, Ye. A. Cand Chem Sci -- (diss) "Electron-microscope study of typical porous adsorbents and catalyzers." Mos, 1959. 14 pp (Acad Sci USSR. Inst of Phys Chem), 150 copies (KL, 43-59, 121)

LEONT'YEV, Ye.A.; LUK'YANOVICH, V.M.

Electron microscope study of the porous structure of active carbons with the use of the replica method. Izv. AN SSSR.Otd. khim. nauk no.11:1955-1961 N '60. (MIRA 13:11)

1. Institut fizicheskoy khimii AN SSSR.
(Carbon, Activated)

Leont'yev, Ye. A.

S/076/60/034/009/015/022
B015/B056

AUTHORS: Dubinin, M. M., Vishnyakova, M. M., Zhukovskaya, Ye. G., Leont'yev, Ye. A., Luk'yanovich, V. M., and Sarakhov, A. I.

TITLE: Investigation of the Porous Structure of Solids by Sorption Methods. V. Application of Different Methods for Studying the Structure of Intermediate and Macro-pores of Active Coals

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 9, pp. 2019-2029

TEXT: A thorough investigation of the structure of intermediate pores, whose size is between micro- and macro-pores, of some typical kinds of coal (from the type AY-10 - AY-14 (AU-10 to AU-14)) with intermediate porosity is carried out by the method of capillary condensation of vapors (benzene or nitrogen), by pressing in mercury, or by electron microscopy. Data concerning the volumes of the micro- and intermediate pores of the investigated kinds of coal are given in a table and show that in all

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examples the volumes of the intermediate pores exceed those of the micro-pores by a multiple. The sorption and desorption experiments carried out with nitrogen vapors at -195°C and benzene at 20°C a device with quartz scales. A detailed description of this device is given in Ref. 1. The sorption isothermal lines (Figs. 1-3) are all S-shaped and have a hysteresis, the beginning of which corresponds to the equilibrium pressure $(p/p_s)_o = 0.175$ for benzene at 20°C and $(p/p_s)_o = 0.45$ for nitrogen at -195°C. For the purpose of determining the porous structure by the method of pressing-in mercury, two pore gauges of the type ПА-4 (PA-4) (Ref. 9) (one for low and one for high pressure) were used. For electron-microscopic examinations a УЭМ-100 (UEM-100) electron microscope was used, carbon replicas were recorded (Fig. 5), and pore diameters from 70 to 110 A were found. The summational curves (Figs. 6-8) of the volume of the intermediate pores with respect to their effective diameters, which were calculated from the sorption isothermal lines for benzene and were measured

Card 2/3

by pressing in mercury, showed good agreement. In the case of the results obtained for nitrogen, less good agreement was found. The electron-microscopic values qualitatively confirm the sorption values and the measured values obtained by pressing in mercury. B. P. Bering and V. V. Serpinskiy are thanked for their interest in the present paper. There are 8 figures, 1 table, and 13 references: 12 Soviet and 1 US.

ASSOCIATION: Akademiya nauk SSSR Institut fizicheskoy khimii (Academy of Sciences USSR, Institute of Physical Chemistry)

SUBMITTED: December 24, 1958

Card 3/3

LEONT'YEV, Ye.A.; LUK'YANOVICH, V.M.

Structure of the particles of graphitized thermal carbon black and of the products of their dissociation. Dokl.AN SSSR 134 no.2:384-386 S '60. (MIRA 13:9)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akad. M.M.Dubininym.

(Carbon black)

S/062/61/000/003/003/013
B117/B208

AUTHORS: Dubinin, M. M., Vishnyakova, M. M., Zaverina, Ye. D., Zhukovskaya, Ye. G., Leont'yev, Ye. A., Luk'yanovich, V. M., and Sarakhov, A. I.

TITLE: Study of adsorption properties and structure of secondary pores of adsorbents having the effect of molecular sieves. Report 1. Industrial samples of synthetic zeolites

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, no. 3, 1961, 396-406

TEXT: The authors studied some peculiarities of the adsorption properties of typical industrial samples of synthetic zeolites and the structure of their secondary pores. They used industrial samples from molecular sieves designed by Linde 4A (designated by MC-4A (MS-4A)), and 5A (designated by MC-5A (MS-5A)) in the form of 4-8 mm long grains with an average diameter of ~3.2 mm. Sorption isotherms and, in some cases, desorption isotherms of nitrogen vapors at -195°C, and water, benzene, and cyclohexane vapors at 20°C were determined. A similar apparatus as that described in Ref. 2

Card 1/3

Study of adsorption properties...

S/062/61/000/003/002/013
B117/B208

(B. P. Bering, M. M. Dubinin, Ye. G. Zhukovskaya, A. I. Sarakhov, and V. V. Serpinskiy, Zh. fiz. khimii 31, 712, 1957) was applied. To study the structure of secondary pores of MS-4A and MS-5A grains, low- and high-pressure porosimeters were used. The latter was a redesigned device of the ПА-4 (PA-4) type (Ref. 5: T. G. Plachenov, V. A. Aleksandrov, and G. M. Belotserkovskiy, Metody issledovaniya struktury vysoko-dispersnykh i poristykh tel, Izd. AN SSSR, M., 1953, str. 59). For the electron-microscopic examination of the structure of secondary pores, the method of single-stage carbon replicas was used. The pictures of carbon replicas of MS-4A and MS-5A taken by means of an УЭМ-100 (UEM-100) electron microscope showed no marked differences. A thorough analysis of stereophotographs indicates that there was no dense packing of the zeolite crystals in the grains. There are interstices of the order of magnitude of small crystals, i.e., some tenths of a micron or some thousandths of an angstrom. Strong enlargements show that the crystal surface is not amorphous. The studies of MS-4A and MS-5A disclosed that the potential adsorption theory could be applied to them. As the authors had not obtained any experimental data, they used the results obtained by N. V. Kel'tsev, for water vapor at 20° and 50°C and at equilibrium pressures p = 1 and 25 mm Hg, which had been

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made available to them. The measured values of adsorption deviate from the calculated values by 3 % at most. Eq. (1) expresses the temperature dependence of the adsorption isotherms satisfactorily:

$$a = (W_0/v)\ \exp\left[-B\,\frac{T^2}{\beta^2}\,(\log p_s/p)^2\right] \tag{1}$$

W_0 = limiting volume of the adsorption space, which is equal to the volume of the micropores of the adsorbent; B = constant dependent on the dimensions of the micropores, which determine the increase of the adsorption potentials; β = affinity factor of the characteristic lines; v = volume of 1 mM of the vapor liquefied at the experimental temperature T. When considering the structure of the secondary pores, it was found that it may be quantitatively described by the sorption and mercury methods of measuring the pores. The characteristics obtained for the pore structure of MS-4A and MS-5A are given in Table 4. There are 9 figures, 7 tables, and 13 references: 12 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, Academy of Sciences USSR)

RADUSHKEVICH, L.V.; LEONT'YEV, Ye.A.; KOLGANOV, V.A.

Semiautomatic device for obtaining particle size distribution hystograms in disperse systems. Zhur. fiz. khim. 35 no.5: 1153-1155 My '61. (MIRA 16:7)

1. Institut fizicheskoy khimii AN SSSR.
(Particle size determination)

L 38097-65 EWG(j)/EWP(e)/EWT(m)/EPF(c)/EPR/EWP(b) Pr-4/Ps-4 WW/GS/WH

ACCESSION NR: AT5003511

S/0000/64/000/001/0030/0033

AUTHOR: Sigarev, A. M.; Leont'yev, Ye. A.

26
B+1

TITLE: Hydrostatic extrusion of carbon and graphite materials 15

SOURCE: Konstruktsionnyye uglegrafitovyye materialy (Carbon and graphite construction materials); sbornik trudov, no. 1, Moscow, Izd-vo Metallurgiya, 1964, 30-33

TOPIC TAGS: carbon, graphite, hydroforming, extrusion, hydrostatic extrusion

ABSTRACT: Modern carbon and graphite construction materials should be uniformly dense at a high density, should have high mechanical strength, good antifriction properties, etc. It should also be possible to machine them accurately. It is known from experience in the electrode industry that the most effective method for producing large rods with a fine-grained structure is by cold extrusion of oven coke powders in a mold. The accepted height-to-diameter ratio for producing rods of satisfactory quality is <1.5. In order to increase productivity, rods with a ratio higher than 1.5 are often extruded, and when the diameter of the rod is 100 mm, the ratio goes as high as 3. In spite of the fact that bilateral extrusion is used, the density of these rods varies through the cross section and lengthwise. The principle reasons for the variation in density are: loss of pressure as a consequence of

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L 30097-65

ACCESSION NR: AT5003511 0

particle friction against the walls of the mold and nonuniformity in the density of the original powder. The hydrostatic extrusion method eliminates some of the disadvantages. In this method, the powder is enclosed in a rubber membrane and compressed in a hydraulic cylinder. According to Pascal's law, all sections on the exterior surface of the rubber bag are under identical pressure. Since in hydrostatic extrusion there is no friction in the outside layers, the rubber membrane is moved together with the particles adhering to it and the given density of the rod is attained at a pressure which is less by 20-30% than in the case of extruding in a mold. This type of rod has a more uniform density distribution throughout the volume than one which is extruded in a mold at the same pressure. It is suggested that this progressive method of extrusion be quickly introduced into industry. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 20Dec63 ENCL: 00 SUB CODE: MT, MM

NO REF SOV: 005 OTHER: 001

Card 2/2

LEONT'YEV, Ye.B.

Voyage of the diesel ship "Kooperatsiia." Inform. biul. Sov. antark. eksp. no.20:48 '60. (MIRA 13:9)

(Antarctic regions--Russian exploration)

KOBLENTS, Ya.P., kand.tekhnicheskikh nauk; LEONT'YEV, Ye.B., mladshiy
nauchnyy sotrudnik

Change in the position of the Lazarev Shelf Ice on maps. Inform.
biul. Sov. antark. eksp. no. 24:46-49 '60. (MIRA 14:5)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy
institut.
(Queen Maud Land --Maps)

LEONT'YEV, Ye.I.

Evaluation of the porosity and oil and gas saturation of rocks based on the value of the specific resistivity of the penetration zone. Geol. i geofiz. no.4:151-155 '65. (MIRA 18:8)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya, Novosibirsk.

LEONT'YEV, Ye. I.

Determining the porosity of the Mesozoic sediments in the middle Ob 'Valley. Geol. nefti i gaza 5 no.6:44-46 Je '61.
(MIRA 14:6)

1. Kolpashevskaya promyslovo-geofizpartiya.
(Ob' Valley--Oil sands)
(Porosity)

BRYLKIN, Yu.L.; LEONT'YEV, Ye.I.

Some problems in the interpretation of microzonde diagrams. Razved. i prom. geofiz. no.50:88-91 '63. (MIRA 18:3)

LEONT'YEV, Ye.I.; BRYLKIN, Yu.L.

Determination of the porosity of Mesozoic sediments in the central part of the West Siberian Plain. Geol. nefti i gaza 6 no.6:32-33 Je '62. (MIRA 15:6)

1. Novosibirskiy geofizicheskiy trest.
(West Siberian Plain--Oil sands--Permeability)

LEONT'YEV, Ye.I.

Possibility of determining the porosity of rocks from data obtained by the method of potentials of self-polarization. Trudy MINKHiGP no.41:159-172 '63. (MIRA 16:10)

LEONT'YEV, Ye.P., kapitan-laytenant v zapase, yakhtennyy kapitan

Development of the sport of sailing in the U.S.S.R. Mor. sbor.
44 no.5:60-68 My '61. (MIRA 16:5)
(Aquatic sports) (Sailing)

KAZARNOVSKIY, L.Sh., kand. tekhn. nauk; LEONT'YEV, Ye.V., inzh.

Astatic electrodynamic coercive force meter. Vest. elektroprom. 27 no.8:27-31 Ag '56. (MLRA 10:9)

1. Nauchno-issledovatel'skiy institut Ministerstva elektrotekhnicheskoy promyshlennosti.

(Magnetic instruments)

DOBROKHOTOV, V.D.; KLUBNICHKIN, A.K.; LEONT'YEV, Ye.V.

Certain conditions for the operation of compressor stations with centrifugal pumps. Trudy VNIIGAZ no.21/29:96-112 '64.
(MIRA 17:9)

LEONT'YEV, YU. A.

Leont'yev, Iu. A. "Preparations for the Control of White Rot (Coniothyrim diplodiella) in Grapes," Vinodelie i Vinogradarstvo SSSR, vol. 11, no. 4, 1951, pp. 43-44. 95.8 V77

SO: SIRA S. 90-53, 15 DEC 1953

LEONTYEV, YU.A.

"A new medicine to fight the diseases of the acorn."Tr. from the Russian., p 411, (GORSKO STOPANSTVO, Vol 8, #9, Nov 1952) (Bulgaria)

SO: Monthly List of ~~Russian~~ East European Accessions, Vol 2, #8 Library of Congress, August 1953, Uncl.

33329
S/143/61/000/012/001/005
D299/D305

24.7700 (1160, 1164, 1385)

AUTHORS: Leont'yev, Yu.N., and Torbin, N.M., Engineers

TITLE: Effect of the barrier position on the breakdown voltage of solid dielectrics

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Energetika, no. 12, 1961, 34 - 38

TEXT: An experimental study is described of the effect of the barrier position on the breakdown voltage of rock-salt. Two types of barriers were used in the experiments: Metal foil 1.5 - 2 μ thick, and triacetate film 3 μ thick. The NaCl specimens consisted of 2 parts of different thickness, their total thickness being d 5 mm. A conical hole was made in one of the specimens, and the barrier inserted. The results of the experiments are given in two figures and in a table. From the figures it is evident that with the barrier placed at a distance of 0.5 - 2.0 mm from the positive point, the breakdown voltage increases to a maximum. The breakdown of the specimen is accompanied by the breakdown of the barrier, both the metallic and the one of triacetate film. The presence of
Card 1/3

the barrier does not affect the start of the breakdown process which takes place in 2 stages: The breakdown of the specimen from the point to the barrier, followed by the breakdown from the barrier to the cathode. In the case of a metallic barrier, the first stage is accompanied by a drop in voltage, followed by an increase toward the breakdown value, and again a sharp drop; the breakdown channel is not continuous (from the first to the second stage). With a dielectric-film barrier, the channel is continuous. The breakdown process begins in the region of maximum field-strength (at the point) and proceeds towards the interior. The cathode processes are of minor importance in the propagation of the discharge; hence the lack of influence of the cathode material on the breakdown voltage established by other investigators. The increase in the breakdown voltage of solid dielectrics, due to the presence of barriers, could find many applications in high-voltage equipment and in cables. The use of barriers in insulators could improve equipment reliability. However, the present study should be viewed as a first step only. Barriers of metal foil and triacetate film, in NaCl lead to a 18 - 20 % increase in breakdown voltage. The maximum va

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S/143/61/000/012/001/005
D299/D305

Effect of the barrier position ...

lue of the breakdown voltage is observed with barriers placed at a distance equivalent to 20 - 30 % of specimen thickness. Barriers of metal foil and of dielectric film do not affect the start of the breakdown in a nonhomogeneous field. The development of discharge in solid dielectrics of considerable thickness and in gases, exhibits a number of similarities. There are 3 figures, 1 table and 13 Soviet-bloc references.

ASSOCIATION: Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy institut imeni S.M. Kirova (Tomsk Order of the Red Banner of Labor Polytechnic Institute imeni S.M. Kirov)

PRESENTED: by Nauchnyy seminar kafedry tekhniki vysokikh napryazheniy (Scientific Seminar of the High-Voltage Techniques Department)

SUBMITTED: January 28, 1961

Card 3/3

KOLESNIKOVA, T.I.; NAZAROVA, V.D.; BADALOV, S.A.; RADIONOV, K.G.; OSTAPENKO, Ye.G.; LEONT'YEV, Yu.N.

Using modified starch in case of drilling in salt-bearing sediments in eastern Turkmenistan. Burenie no.7:20-22 '64. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut burovoy tekhniki i kontora razvedochnogo bureniya No.5 tresta "Turkmenneftegazrazvedka".

ANTSYFEROV, I.K., inzh.; YERMANOK, M.Z., kand. tekhn. nauk; GANFTS, F.M.; SLAVIN, V.B.; LEONT'YEV, Yu.S.; DEMEN'SHIN, V.P.; POTOPAYEV, A.P.

Book reviews. Stal' 25 no.2:147-150 F '65. (MIRA 18:3)

1. Sinarskiy trubnyy zavod (for all except Antsyferov, Yermanok).

"The Effect of Injuries on the Metabolism of Phosphorus containing Substances." Paper submitted at 2nd Conference on Biochemistry of the Nervous System, AS USSR, 12-16 Feb 1957, Kiev.

Translation 1122802

ZUBAKINA, A.I.; LEONT'YEVA, A.A.; MATUSIS, Z.Ye.

Certain reactive modifications of the blood during tissue therapy. Biul.eksp.biol. i med. 37 no.5:27-30 My '54. (MLRA 7:7)

1. Iz Nauchno-issledovatel'skogo instituta vosstanovitel'noy khirurgii, ortopedii i travmatologii (dir. M.G.Grigor'yev) Gor'kiy.

(TISSUE THERAPY,
*eff. on blood)
(BLOOD,
*eff. of tissue ther.)

LEONTYEVA, A.A.

EXCERPTA MEDICA Sec.5 Vol.10/5 Gen.Pathology May57

1556. LEONTYEVA A.A. and SCHUMILKINA E.I. *The protein metabolism in the skin and the subcutis in cases of elephantiasis (Russian text) ARKH.PATOL. 1956, 18/5 (62-64) Tables 2

Comparative determinations of non-protein nitrogen values following tissue autolysis of skin and subcutis in normal subjects (8) and patients with elephantiasis are described. The coefficient of autolysis characterizes the enzymatic protease activity and is determined by the increase in non-protein nitrogen during autolysis of high-molecular substances to nitrogen. In the case of elephantiasis there is an unmistakable decrease in this coefficient, whereas the water content of the skin and the subcutis is markedly increased.

Brandt - Berlin (V,13)

LEONT'YEVA, A.A., kand.med.nauk; VORONTSOV, D.V., nauchnyy sotrudnik

Treatment of hemangiomas of the skin with radioactive phosphorus.
Vest.rent.i rad. 34 no.5:83-86 S-O '59. (MIRA 13:3)

1. Iz Gor'kovskogo nauchno-issledovatel'skogo instituta travmatologii i ortopedii (dir. - dots. M.G. Grigor'yev).
(SKIN neoplasms)
(HEMANGIOMA radiotherapy)
(PHOSPHORUS radioactive)

ALEKSEYEV, A.Ye.; VORONTSOV, D.V.; LEONT'YEVA, A.A.; TELESHEVA, N.I.;
SHATUNOVSKAYA, Ye.G.

Problem of the permeability (resorption) of the capillaries in transplanted skin under experimental and clinical conditions. (MIRA 13:4)
Ortop.,travm.i protez. 20 no.11:36-42 N '59.

1. Iz Gor'kovskogo nauchno-issledovatel'skogo instituta travmatologii i ortopedii (direktor - dotsent M.G. Grigor'yev).
(SKIN TRANSPLANTATION exper.)
(CAPILLARY PERMEABILITY)

LEONT'YEVA, A.A., starshiy nauchnyy sotrudnik (Gor'kiy, Arzamasskoye shosse, d.54, kv.33); IUDINA, K.A., mladshiy nauchnyy sotrudnik

Use of proteolytic enzymes in the treatment of deep burns. Ortop., travm. i protez. 25 no.6:61-62 Je '64.

(MIRA 18:3)

1. Iz Gor'kovskogo instituta travmatologii i ortopedii (dir. - dotsent M.G. Grigor'yev).

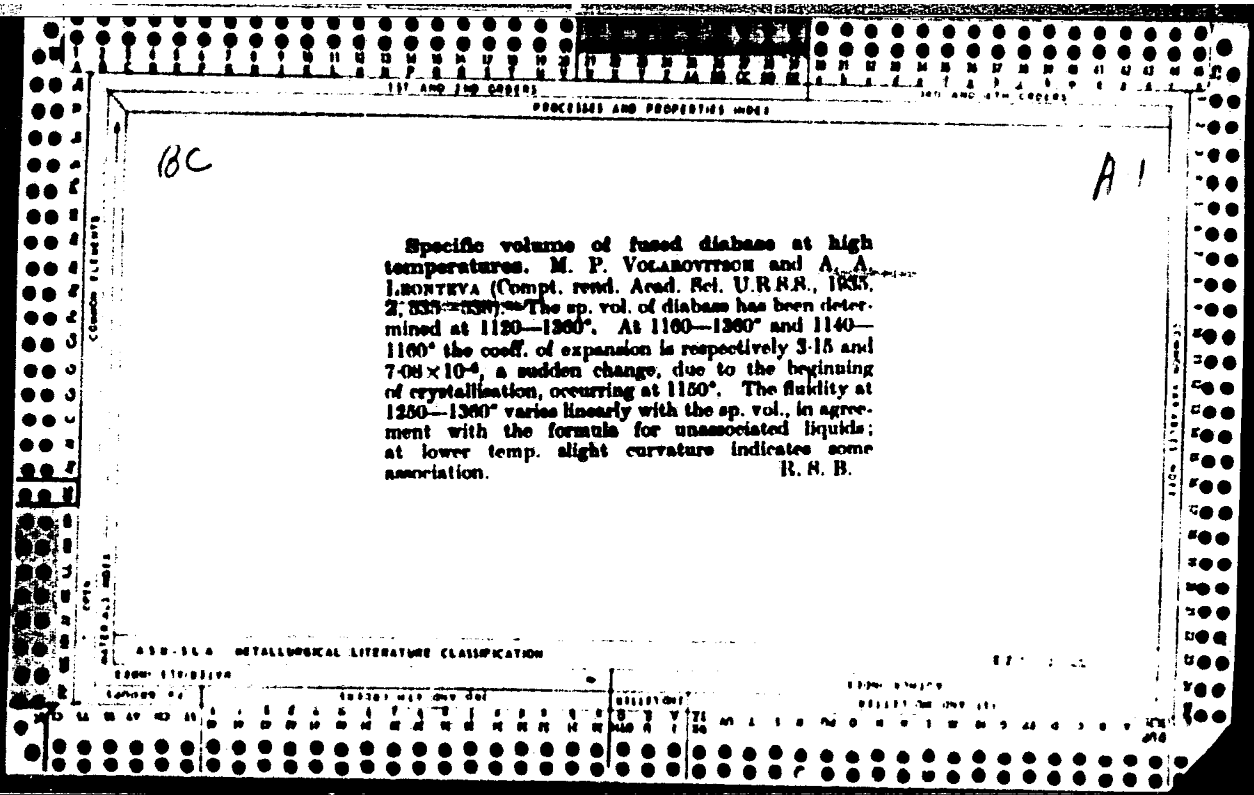
1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Value of the activation energy for ionic liquids. A. A. Leont'eva. *Acta Physicochim. U. R. S. S.* 11, 851-4 ([illegible])(in English).—Theoretical. For ionic salts of the NaCl type the activation energy is approximately equal to the sum of the heats of fusion and the van der Waals interaction energy. For AgX salts or H_2O only the London dispersion effect should be considered. F. H. R.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION


1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX
3RD AND 4TH ORDERS
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

BC

A 1

Specific volume of fused diabase at high temperatures. M. P. VOLAROVITSCH and A. A. LEONTEVA (Compt. rend. Acad. Sci. U.R.S.S., 1935, 2, [illegible]).—The sp. vol. of diabase has been determined at 1120—1360°. At 1160—1360° and 1140—1160° the coeff. of expansion is respectively 3·15 and $7·08 \times 10^{-4}$, a sudden change, due to the beginning of crystallisation, occurring at 1150°. The fluidity at 1250—1360° varies linearly with the sp. vol., in agreement with the formula for unassociated liquids; at lower temp. slight curvature indicates some association. R. S. B.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

BC

A1

Specific volume of fused salts at high temperatures. M. P. VOLAROVITSCH and A. A. LEONTEVA (Compt. rend. Acad. Sci. U.R.S.S., 1935, 2, 530—542). The coeff. of expansion of fused NaH_2PO_4, $NaPO_3$, and K_2SiO_3 are, respectively, 5·3 × 10^{-4} (at 620—635°), 4·3 × 10^{-4} (at 600—770°), and 4·0 × 10^{-4} (at 1000—1200°). For NaH_2PO_4 and K_2SiO_3 fluidity varies linearly with sp. vol. except at low temp., where the slight curvature indicates some association. $NaPO_3$ is unassociated. R. S. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

SA

A 53
b

1621. Rigidity of Vitreous Substances over their Softening Ranges. B. W. Derjaguin, A. A. Leontjewa and M. P. Wolarowitch. *Acta Physicochimica*, 5, pp. 817-834, 1936. *In German.*—The dynamic method of measurement described consists in casting a cylindrical shell of the substance between two coaxial cylinders, of which the outer is fixed and the inner forms part of a suspended system of high inertia, and determining the period of oscillation of the latter. Paraffin wax and a number of resins, etc., were studied; some showed such heavy internal damping that no oscillations could be produced, while with others there was evidence of slip on the cylinder surface. Rigidity moduli are given for rosin, guaiacum, glucose and Mendéleff cement; the data for rosin, in conjunction with viscosity data, are held to throw doubt on the theory of relaxation oscillations. L. V. C.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3C

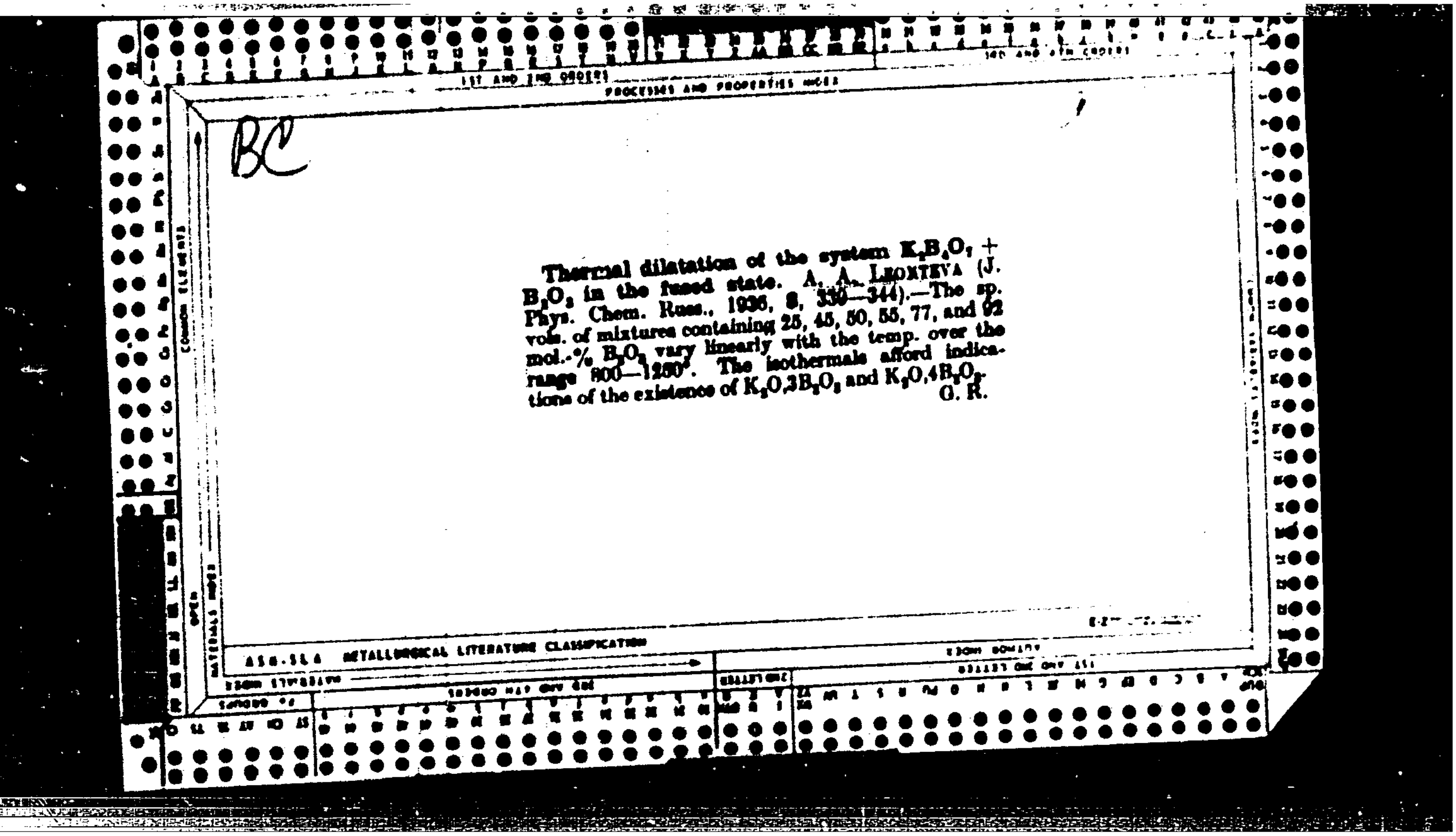
a-1

Thermal expansion of binary systems in the fused state. A. LEONTIEVA (J. Phys. Chem. Russ., 1936, 8, 66—73).—Sp. vol. data for fused mixtures of $NaPO_3$ and $NaBO_2$ at 600—1000° afford evidence for the formation of the compound $NaBO_2,NaPO_3$.

Corresponding data for mixtures of KPO_3 and $Na_2B_4O_7$ afford no clear evidence of compound formation.

E. R.

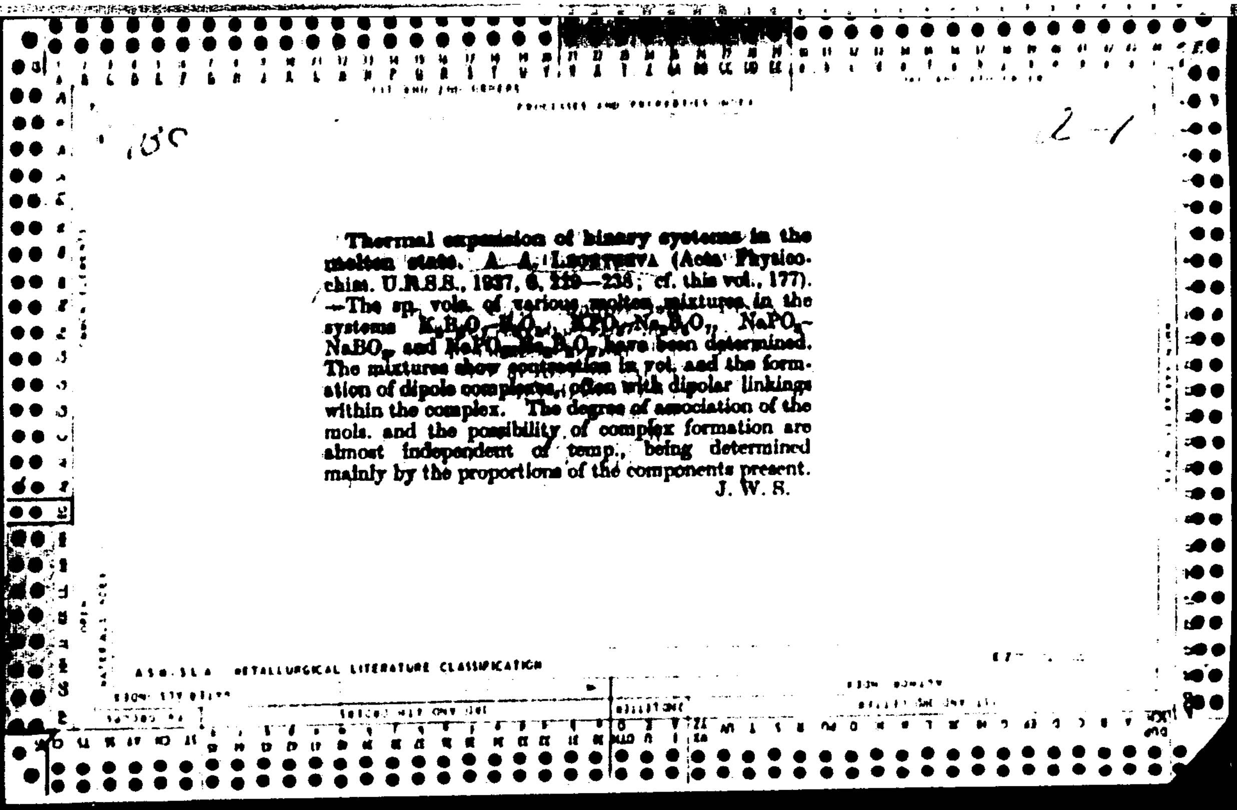
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION


1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX
3RD AND 4TH ORDERS
COMMON ELEMENTS
MATERIALS INDEX
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION
SUBJECT INDEX

BC

Thermal dilatation of the system $K_2B_4O_7$ + B_2O_3 in the fused state. A. A. LEONTEVA (J. Phys. Chem. Russ., 1936, 8, 330—344).—The sp. vols. of mixtures containing 25, 45, 50, 55, 77, and 92 mol.-% B_2O_3 vary linearly with the temp. over the range 800—1250°. The isothermals afford indications of the existence of $K_2O,3B_2O_3$ and $K_2O,4B_2O_3$.

G. R.

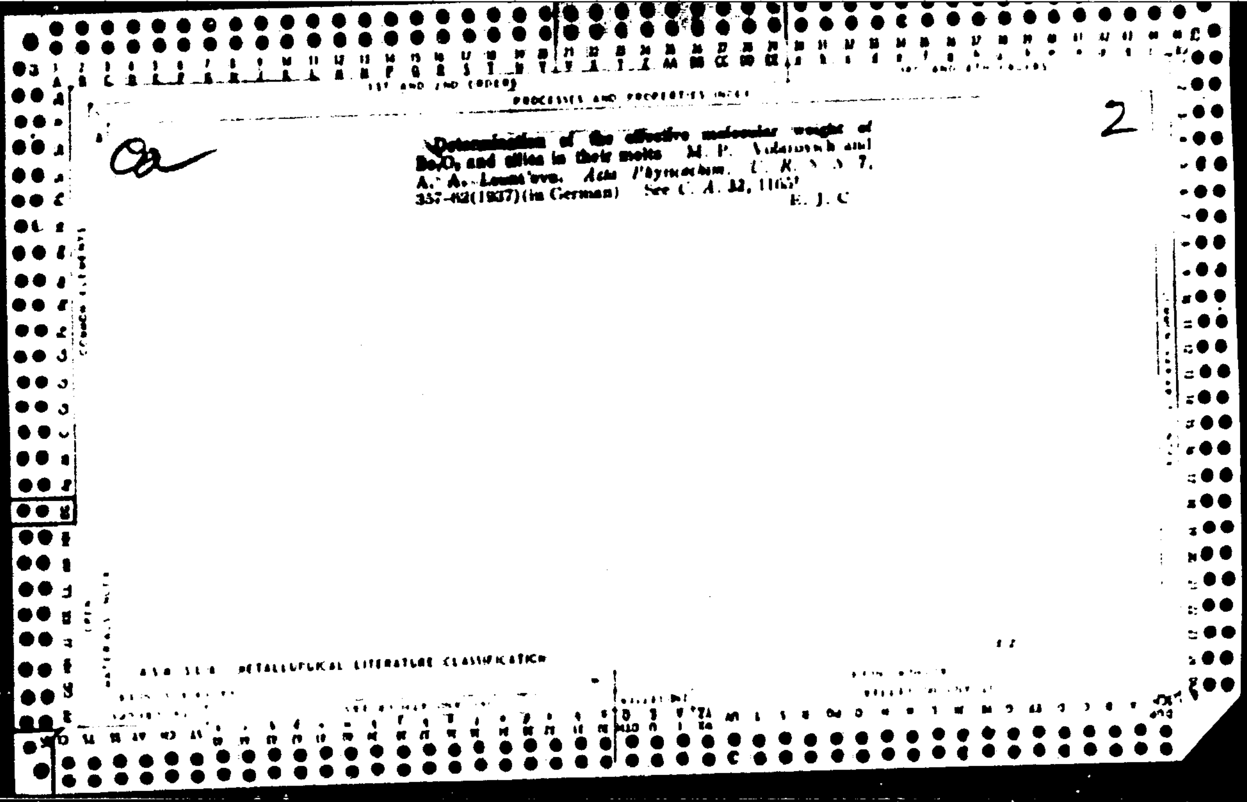


2-1

Thermal expansion of binary systems in the molten state. A. A. LEONTJEVA (Acta Physicochim. U.R.S.S., 1937, 6, 229—238; cf. this vol., 177).—The sp. vols. of various molten mixtures in the systems $K_2B_4O_7$–B_2O_3, KPO_3–$Na_2B_4O_7$, $NaPO_3$–$NaBO_2$, and $NaPO_3$–$Na_2B_4O_7$ have been determined. The mixtures show contraction in vol. and the formation of dipole complexes, often with dipolar linkings within the complex. The degree of association of the mols. and the possibility of complex formation are almost independent of temp., being determined mainly by the proportions of the components present.

J. W. S.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

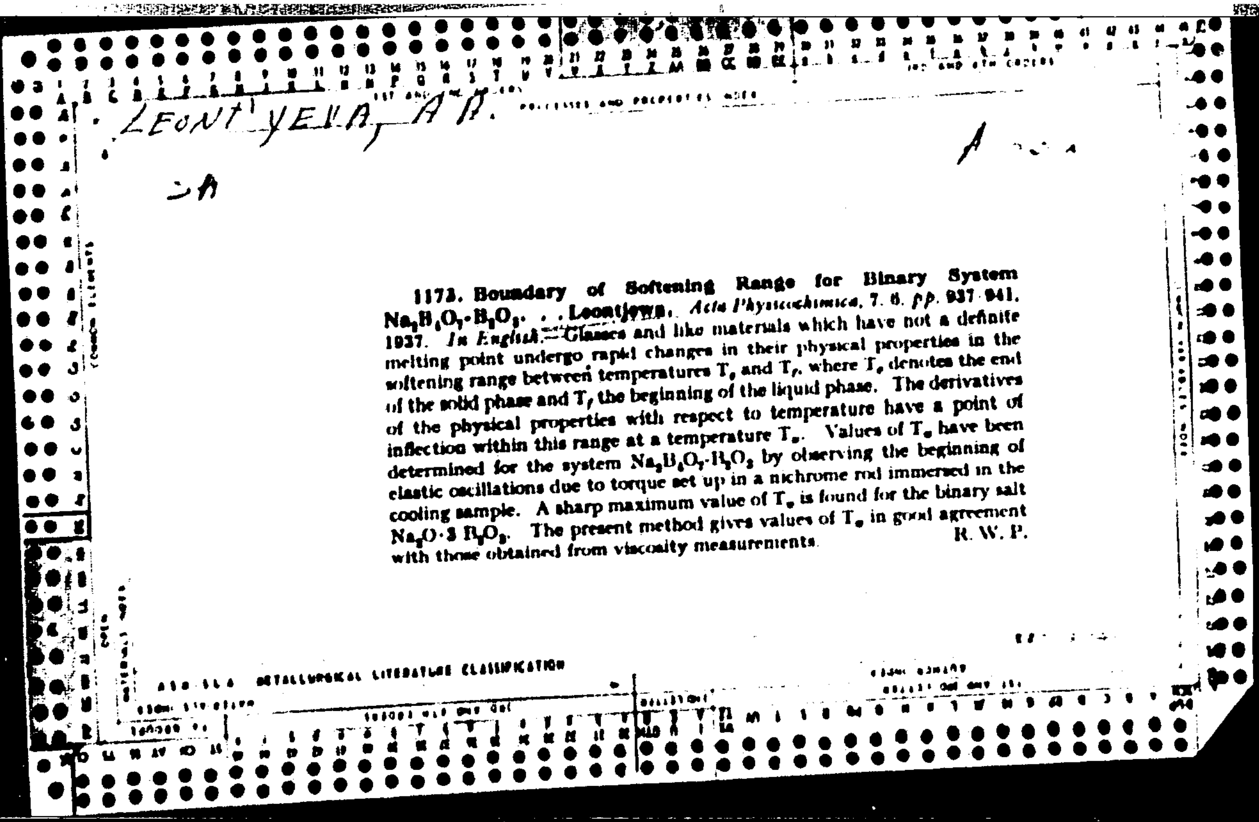
Ca

2

Determination of the effective molecular weight of B_2O_3 and silica in their melts. M. P. Volarovich and A. A. Leont'eva. Acta Physicochim. U. R. S. S. 7, 357-62(1937)(in German). See C. A. 32, 1165

E. J. C.

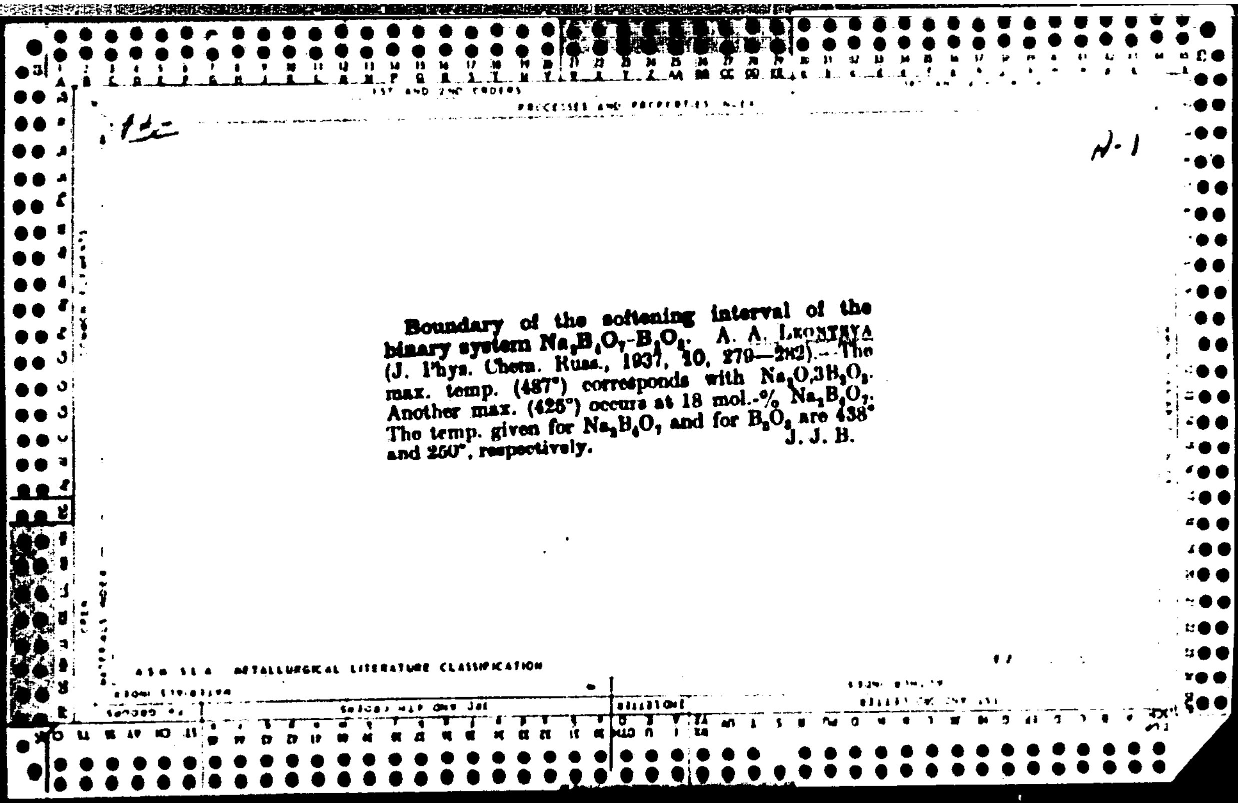
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



LEONT'YEVA, A.A.

1173. Boundary of Softening Range for Binary System $Na_2B_4O_7$-B_2O_3. . . Leontjewa. *Acta Physicochimica*, 7, 6, pp. 937-941, 1937. *In English.*—Glasses and like materials which have not a definite melting point undergo rapid changes in their physical properties in the softening range between temperatures T_s and T_f, where T_s denotes the end of the solid phase and T_f the beginning of the liquid phase. The derivatives of the physical properties with respect to temperature have a point of inflection within this range at a temperature T_w. Values of T_w have been determined for the system $Na_2B_4O_7$-B_2O_3 by observing the beginning of elastic oscillations due to torque set up in a nichrome rod immersed in the cooling sample. A sharp maximum value of T_w is found for the binary salt $Na_2O \cdot 3B_2O_3$. The present method gives values of T_w in good agreement with those obtained from viscosity measurements. R. W. P.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



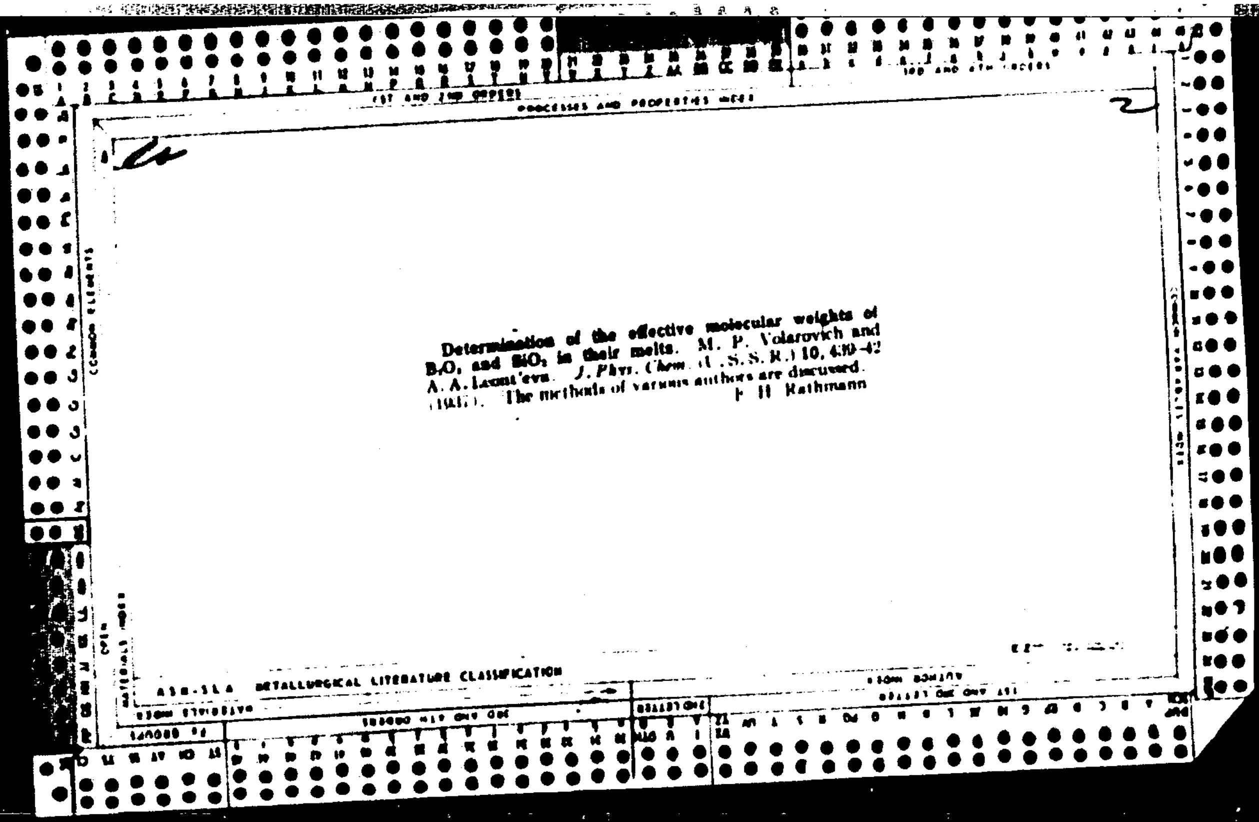
1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

N-1

Boundary of the softening interval of the binary system $Na_2B_4O_7$–B_2O_3. A. A. Leonteva (J. Phys. Chem. Russ., 1937, 10, 279—282).—The max. temp. (487°) corresponds with $Na_2O,3B_2O_3$. Another max. (425°) occurs at 18 mol.-% $Na_2B_4O_7$. The temp. given for $Na_2B_4O_7$ and for B_2O_3 are 438° and 250°, respectively. J. J. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

2

Determination of the effective molecular weights of B_2O_3 and SiO_2 in their melts. M. P. Volarovich and A. A. Leont'eva. *J. Phys. Chem.* (U.S.S.R.) 10, 430-42 (1937). The methods of various authors are discussed.

F. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

A-2

BC

Viscosity of obsidianite and its relation to the genesis of pumice. M. P. VOLAROVITSCH and A. A. LEONTIEVA (Compt. rend. Acad. Sci. U.R.S.S., 1937, 17, 423—426).—Measurements of η of 3 samples of obsidianite at 800—1200° gave a linear plot of log η against temp., lying considerably below the corresponding plot for quartz (due to the alkalis in the obsidianite). Between 1060° and 1170° all three specimens swelled up into spongy pumice-like structures. If an acid magma of the composition of obsidian is erupted below 1000°, it will solidify as a glass, whereas if the initial temp. is 1100—1200°, a pumice will result. R. C. M.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

An application of the viscosity formulas of E. N. da C. Andrade and S. E. Khalkin to fused salts. A. A. Leont'eva. *J. Phys. Chem.* (U. S. S. R.) 11, 310-16(1938).—The viscosity formulas of Andrade (cf. *C. A.* 28, 3033^4), and Khalkin (cf. *C. A.* 30, 6250^8) were applied to the following salts in molten state at high temp.: $NaPO_3$; the $Na_2B_4O_7$-B_2O_3 system; the Na_2O-SiO_2 system; and $K_2B_4O_7$-B_2O_3 system. The Andrade formula gave results in satisfactory agreement with the exptl. data; the consts. of the formula were represented by a straight line over a wide temp. interval. The exception was $Na_2B_4O_7$, for which the m. p. exptl. 2 regions of the viscosity (supercooled and normal); within each of the regions the Andrade formula was satisfactory. The Khalkin formula for all salts in molten state was satisfactory only in sep. portions of the temp. interval. Neither formula applied to dissocd. salts in molten state gave good results. Fourteen references.

A. A. Podgorny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

LEONTEYEVA, A. A.

BC

A-1

PROCESSES AND PROPERTIES INDEX

Velocity of fall of liquid drops in melts. M. P. VOLAROVITSCH and A. A. LEONTEEVA (Acta Physicochim. U.R.S.S., 1939, **11**, 251—256).—The rate of fall of drops of Pb in liquid B_2O_3 is given within 5—10% by Hadamard and Rybczynski's modification of Stokes' formula (cf. Bond, Phil. Mag., 1927, [vii], 4, 898). The fall of metal drops in slags and the rise of slag through molten metals are discussed.

F. L. U.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

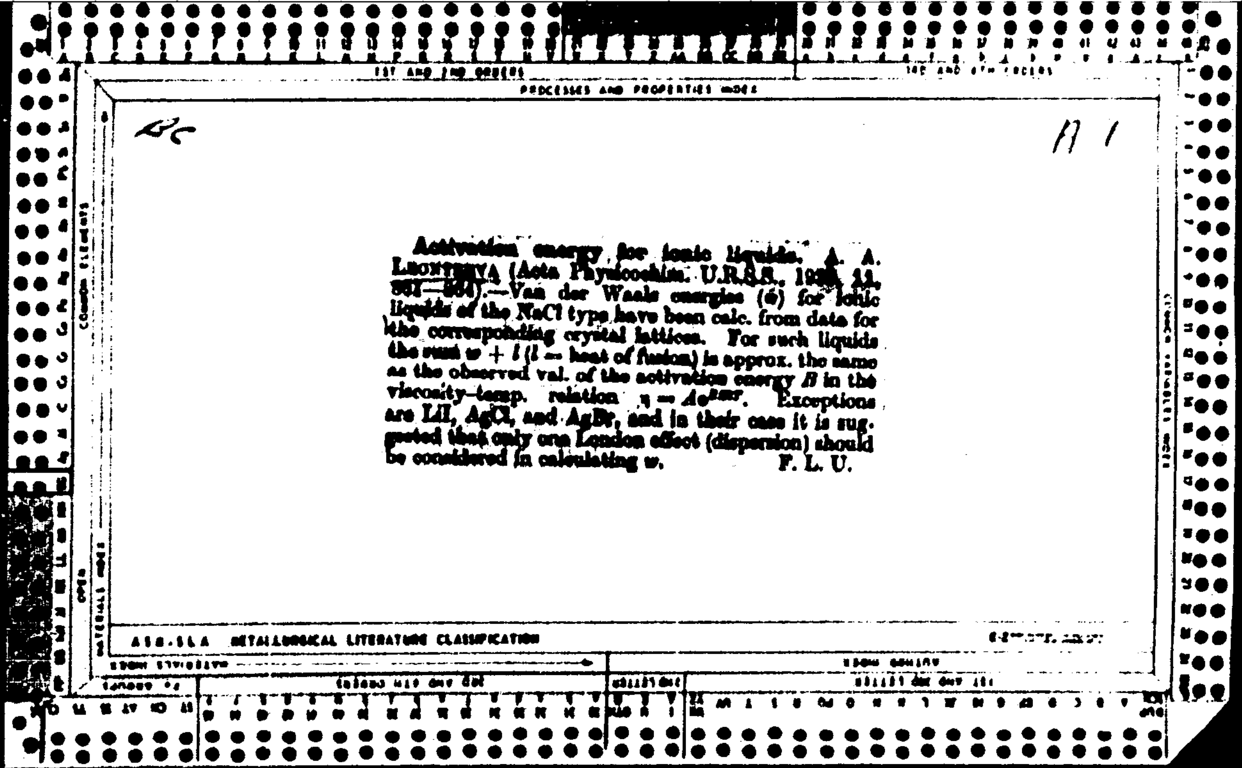
PROCESSES AND PROPERTIES INDEX

BC

9 1

Viscosity of system B_2O_3–SiO_2 and calculation of activation energy for vitreous systems. A. Leonteeva (Acta Physicochim., U.R.S.S., 1939, 11, 257—264).—Measurements of η at 530°, 630°, and 800° are recorded for mixtures containing up to 22% of SiO_2. For 5% of SiO_2 the activation energy increases with rise of temp., in contrast to the behaviour of normal liquids; this effect is attributed to strong interaction between ions produced by increased dissociation of the mols. at higher temp. Above 10% of SiO_2 the glasses behave like normal structural liquids. F. L. U.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Bc

A 1

Activation energy for ionic liquids. A. A. LEONTEVA (Acta Physicochim. U.R.S.S., 1939, 11, 861—864).—Van der Waals energies (w) for ionic liquids of the NaCl type have been calc. from data for the corresponding crystal lattices. For such liquids the sum $w + l$ (l = heat of fusion) is approx. the same as the observed val. of the activation energy B in the viscosity–temp. relation $\eta = Ae^{B/RT}$. Exceptions are LiI, AgCl, and AgBr, and in their case it is suggested that only one London effect (dispersion) should be considered in calculating w. F. L. U.

A10-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Measurements of the viscosity of the system boron oxide-silica and the calculation of the energy of activation for vitreous systems. A. Leont'eva. *J. Phys. Chem.* (U.S.S.R.) 13, 1020-3(1939); cf. C. A. 34, 2000^4.
H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

BC

a-2

Viscosity of meteorites. M. P. VOLAROVITSCH and A. A. LEONTIEVA (Compt. rend. Acad. Sci. U.R.S.S., 1939, 22, 600—601).—The softening point of indochinite is 1070° and of moldavite 1100°. Tectites when kept at 1400° cake into a homogeneous mass and then sinter into a glass. The η of tectites (I) from Indo-China, moldavites (II), and a stony meteorite from Bachslev (III) have been measured in their softening range by the rate of extension of a prism 3·0 × 0·6 × 0·6 cm. at const. temp., and in the molten state by [illegible] method. The η of (I) is 1·06 × 10^9 at [illegible]°, 1·22 × 10^6 at 1400°, (II) 1·70 × 10^9 at 980°, 3·30 × 10^6 at 1410°, (III) 1·48 × 10^4 at 1390°, 1·15 × 10^4 at 1410°. These vals. lie between those of quartz and ordinary glass and indicate that the meteorites are of cosmic origin. F. J. L.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

LEONT'YEVA, A.A.

1.

Viscosity measurements of obsidians and water containing glasses. A. A. Leont'eva. *Bull. acad. sci. U.R.S.S., Ser. geol.* 1940, No. 2, 44-54. The viscosity of rocks contg. volatile components is dependent on their amt. This is shown by black obsidian from Ani (Armenian S.S.R.). This black variety has a rather small viscosity and easily loses the volatiles during the viscosity measurements. It forms a pumice at 1150°. Incomplete chem. compn. is SiO_2 75.20, Al_2O_3 13.58, TiO_2 0.14, Fe oxides 1.38, alkalies 8.06, loss on ignition 0.12%. Measurements were also made of the viscosity of water-contg. glass kubbinite contg. SiO_2 70.24, Al_2O_3 11.40, FeO + Fe_2O_3 2.66, Na_2O 4.58, K_2O 2.41, MnO traces, CaO + MgO 2.0, loss on ignition 6.02%. It fuses at 1150° without formation of pumice. Its viscosity is of the same order as of obsidians.

B. Z. Kamich

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

CA

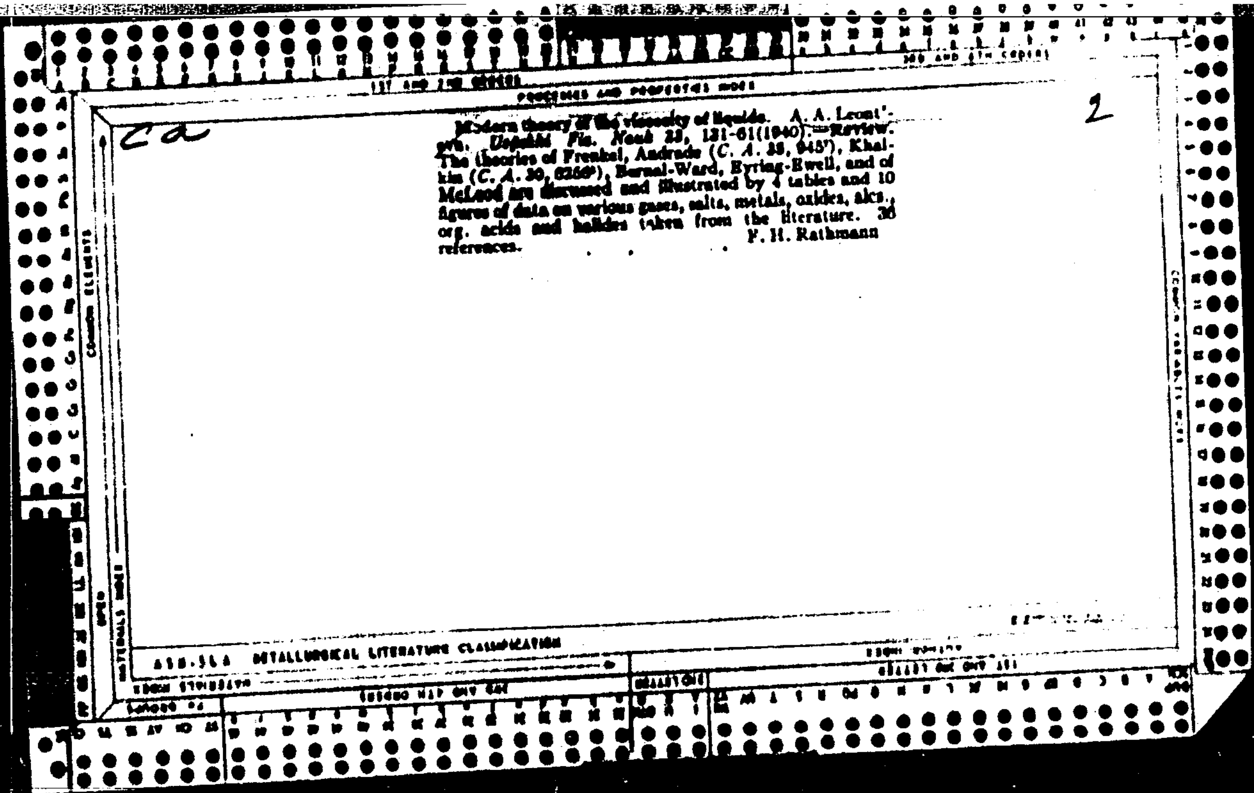
2

The speed of crystallization of some silicate glasses as a function of viscosity. A. Leont'eva. Acta Physicochim. U. R. S. S. 13, 423-8(1940)(in English).—By use of the data of Dietzel (C. A. 34, 4001), Washburn (C. A. 15, 2791) and others, it is shown that the rates of linear crystn. in the region of supercooling temps. of 41 different Na_2O-CaO-SiO_2 glasses as well as of some other glasses contg. MgO, Al_2O_3, SrO and B_2O_3 as a function of viscosity obey the equation $v = (k/\eta) + k_0 \log \eta$ where k and k_0 are functions of the compn. of the glass in question. These results support the Frenkel (C. A. 36, 6480) and Richards (C. A. 36, [illegible]) predictions based on the assumption of linear crystn. as a process involving an activation energy.

F. H. Rathmann

2

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



Ca

2

1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX
3RD AND 4TH ORDERS

Modern theory of the viscosity of liquids. A. A. Leont'eva. *Uspekhi Fiz. Nauk* 23, 121-61(1940).—Review. The theories of Frenkel, Andrade (*C. A.* 35, 945^{7}), Khalkin (*C. A.* 30, 6266^{9}), Bernal-Ward, Eyring-Ewell, and of McLeod are discussed and illustrated by 4 tables and 10 figures of data on various gases, salts, metals, oxides, alcs., org. acids and halides taken from the literature. 36 references.

F. H. Rathmann